PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of	
John C. Harvey and James W. Cuddihy	Examiner: LUTHER
Serial No. 08/447,415	Group Art Unit: 2742
Filed: May 23, 1995	Atty. Docket. 05634.0129
For: **SIGNAL PROCESSING APPARATUS AND METHODS**	

BOX: ISSUE FEE - AMENDMENT

Assistant Commissioner of Patents
and Trademarks
Washington, D.C. 20231

Sir:

I. REQUEST TO ENTER AMENDMENT AFTER NOTICE OF ALLOWANCE AND AFTER PAYMENT OF ISSUE FEE UNDER 37 C.F.R. § 1.312(A)

This amendment after the notice of allowance and payment of the issue fee is submitted in response to the interviews on June 16th, July 1st and 15th, 1999 and per request of the Examiners of the PTO. Applicants respectfully request that the following amendments be considered and entered into the above-captioned application and the claims be permitted to issue:

In the Claims:

Please amend claims 3, 4, 6-9 & 11-14 as follows:

3. (Three Times Amended) A method of controlling a remote station based on a broadcast or cablecast transmission, said method comprising the steps of:

(a) receiving a control signal from a first remote station;

(b) passing said control signal to a computer and causing said computer to compute a variable value in response to said control signal;

(c) generating, based on said computed variable value, [a software] an instruction module [based on said computed variable value] comprising executable code, said generated instruction module to be transferred to a memory at a second remote station and executed upon command;

(d) embedding said generated [software] instruction module into an information transmission to be broadcast or cablecast; and

(e) transmitting said information transmission to [a] said second remote station in a broadcast or cablecast transmission.

In claim 4, line 2, please delete "software" and insert --generated instructions--.

In claim 6, line 1, please delete "software" and insert --generated instructions--.

In claim 7, line 2, please delete "software" and insert --generated instructions--.

8. (Amended) The method of claim 3, wherein said generated [software] instruction module is transmitted with a data module and said step of generating said [software] instruction module further comprises the steps of:

selecting some generally applicable video, audio, graphics, or text; and

placing said selected video, audio, graphics, or text in said data module.

In claim 9, line 1, please delete "software" and insert --generated instructions--.

11. (Three Times Amended) A remote station, comprising:

(a) receiving means for receiving a control signal from a first remote station;

(b) computation means coupled to said receiving means;

(c) transmission means for passing said control signal to said computation means, wherein said computation means computes a variable value in response to said control signal and generates, based on said computed variable value, at least a portion of [a software] an instruction module comprising executable code, [based on said computed variable value,] said generated at least a portion of said instruction module to be transferred to a memory at a second remote station and executed upon command;

(d) embedding means for embedding said generated [software] at least a portion of said instruction module into an information transmission to be broadcast or cablecast; and

(e) broadcast transmission means for transmitting said information transmission to [a] said second remote station in a broadcast or cablecast transmission.

12. (Three Times Amended) A method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:

receiving at least one instruct signal which is effective to cause a first remote station to generate at least a portion of a control signal which is effective to cause a second remote station to compute a variable value in response to said control signal and generate, based on said computed variable value, at least a portion of [a software] an instruction module [based on said computed variable value] comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a third remote station and executed upon command;

receiving at least one transmitter control signal which operates at said [first] second remote station to embed said generated at least a portion of said instruction [software] module into an information transmission to be broadcast or cablecast, and transmit said information transmission to [a] said [second] third remote station in a broadcast or cablecast transmission; and

transmitting said at least one instruct signal and said at least one transmitter control signal to said first remote station.

13. (Three Times Amended) A method of controlling a remote station, comprising the steps of:

generating at least a control portion of at least one control signal, said at least one control signal effective to cause said remote station to (1) compute a variable value in response to said at least one control signal, (2) generate, based on said variable value, at least a control portion of [a software] an instruction

module comprising executable code, [based on said variable value] said at least said control portion of said instruction module to be transferred to a memory at a subscriber station and executed upon command, and (3) transmit said at least said control portion of said generated instruction [software] module in a broadcast or cablecast transmission; and

transmitting said at least one control signal to said remote station in an information transmission which contains video.

14. (Twice Amended) A method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:

(1) receiving an information transmission to be broadcast or cablecast;

(2) receiving at least one instruct signal which is effective to accomplish [at least one of]:

(a) effecting a transmitter station to generate at least a portion of at least one first control signal, said at least one first control signal effective to cause said remote station to compute a variable value in response to said at least one first control signal, generate, based on said variable value, at least a portion of [a] an instruction module comprising executable code, said at least a portion of said instruction module to be transferred to a memory at said remote station and executed upon command, [based on said variable value,] and transmit said generated at least a portion of said instruction module in said broadcast or cablecast transmission; and

(b) effecting said remote station to generate at least a portion of at least one second control signal, said at least one second control signal effective to cause a subscriber station at said remote station to compute a variable value in response to said at least one second control signal, generate at least a portion of a module based on said variable value, and transmit said module upon command;

(3) receiving at least one transmitter control signal which operates at said transmitter station to communicate at least one of (i) said at least one instruct signal and (ii) said at least one first control signal to a transmitter; and

(4) transmitting said information transmission, said at least one instruct signal, and said at least one transmitter control signal to at least one of said transmitter station and said remote station.

II. REMARKS

A. Summary of Amendments to the Claims

Claims 3, 4, 6-9 & 11-14 have been amended. Claims 3-14 remain pending in the application.

Independent claims 3, 11, 12, 13, and 14 are amended above to replace the phrase "software module" with "instruction module," at the request of the Examiners during the interview of July 15th, 1999. These claims, as amended above, further define the instruction module as including executable code, able to be transferred to a memory, and executed upon command. Claims 4 and 6-9 are amended above to refer to the "instruction module" as recited in claim 3.

Applicants respectfully submit that the above amendments include no new matter nor change the scope of the claims. The amendments are intended to clearly set forth and positively define attributes of the instruction modules. The language of the proposed amendment is fully supported by the specification as demonstrated below in Section D.

B. Response to Obvious-Type Double Patenting Allegation over Claims 9 & 12 of U.S. Pat. No. 5,109,414

1. PTO Assertions in the Interview of July 15th, 1999.

PTO generally asserts that claims 9 and 12 of U.S. Pat. No. 5,109,414 (hereafter, "the '414 patent") are patentably distinct from the invention defined by Applicants' independent claims, i.e., **3, 11, 12, 13 & 14** under the judicially created doctrine of obvious-type double patenting.

Additionally, the Examiner of record stated that:

1. the use of the entire patent '414 disclosure is applicable to determine the scope of the patented claims applied to the instant application's claims;

2. a combination of the claims in the '414 patent may used as basis for a double patenting rejection of the claims in the instant; and

3. the "comprising" language in the instant application's claims renders the claims obvious in light of the patent '414 claims.

2. Standard of Review for Obvious-Type Double Patenting Rejection

Under the doctrine of double patenting, the PTO must determine whether the invention defined by the application claims would have been obvious over the subject matter defined by the claims of the '414 patent, in light of the prior art. *In re Longi*, 225 USPQ 645, 648 (Fed. Cir. 1985).

An obvious-type double patenting rejection is analogous to the nonobviousness requirement of 35 U.S.C. 103 except that the patent principally underlying the double patenting rejection is not considered prior art. *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967). Therefore, any analysis employed in an obvious-type double patenting rejection parallels the guidelines

for analysis of a 35 U.S.C. 103 obviousness determination. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985). M.P.E.P. § 804 (II) B (1).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) that establish a background for determining obviousness under 35 U.S.C. 103 are employed when making an obvious-type double patenting analysis. These factual inquiries are summarized as follows:

(A) Determine the scope and content of the patent claim and the prior art relative to the claim in the application at issue;

(B) Determine the differences between the scope and content of the patent claim and the prior art as determined in (A) and the claim in the application at issue;

(C) Determine the level of ordinary skill in the pertinent art; and

(D) Evaluate any objective indicia of nonobviousness. *M.P.E.P. § 804 (II) B (1).*

Given these standards for determination, Applicants fail to understand why the Examiner concluded that the term "comprising" in the application claim language could be used as basis for an obvious-type double patenting rejection over the subject matter defined by claims of the '414 patent. This conclusion failed to take into account any of the above factual inquiries in determining obvious-type double patenting.

3. Scope of Availability of the Patent Specification in Determining Obvious-Type Double Patenting

When considering whether the invention defined in a claim of an application is an obvious variation of the invention defined in the claim of a patent, ***the disclosure of the patent may not be used as prior art.*** However, this

does not mean that the Examiner is precluded from the use of the patent disclosure.

There are two specific instances in which the specification can be used to determine the scope of the claim. (1.) In determining the meaning of a word in a claim, the specification may be examined. However, the words in a claim are generally not limited in their meaning by what is shown in the disclosure. (2.) In such instances where the disclosure will serve as a dictionary for the terms appearing in the patent, the disclosure may be used in interpreting the scope of the claim. *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970).

The disclosure of the patent is only an aid in determining the scope of the claim. Proper examination in the instant application must first determine what portion of the '414 patent disclosure supports the invention of claims 9 & 12, since only these portions may be considered in interpreting the scope of the claim. Once the scope of the claim is determined, then one must ask whether the pending claim would have been an obvious variation over the patented claim in view of the prior art, not the patented claim in view of the patent specification.

Examiner's assertion that the *entire* patent disclosure is applicable to determine obviousness as applied to the instant application's claims is unfounded and unlawful. The use of broad assertions in the patent specification which do not support the patent claims at issue to determine obvious-type double patenting constitutes using the patent as prior art, which it is not. *In re Vogel, supra.*

Additionally, there is no legal authority to combine patented claims in a single application to determine obvious-type double patenting. As stated above, the specification may be used to solely determine the scope of the claims, not motivation for obvious-type double patenting rejections. Each of Applicants' patented claims represent single inventions supported by at least one

embodiment in the specification of the patent. Applicants' own patented inventions cannot be used against him as prior art in determining obvious-type double patenting since the patent disclosure may not be used as prior art. *In re Boylan*, 55 CCPA 1041, 392 F.2d 1017, 157 USPQ 370 (1968), *supra; In re Aldrich*, 55 CCPA 1431, 398 F.2d 855, 158 USPQ 311 (1968).

4. Applicants' Analysis as to Why Obvious-Type Double Patenting Rejection is Not Proper in the Instant Case

a. Specification Support for Claims 9 & 12 of U.S. Pat. No. 5,109,414.

Since M.P.E.P. § 804 II (B) 1 states that one must first determine how much of the patent disclosure pertains to the invention claimed in the patent because only [t]his portion of the specification supports the patent claims and may be considered, Applicants provide specification support for claims 9 and 12 of the '414 below to offer assistance in determining an exemplary portion of the patent disclosure pertaining to the invention claimed in the patent.

Claim 9 of the '414 patent is generally directed to a multichannel television distribution system in which a receiver/distributor means receives television programming from a plurality of program sources and directs the programming to a matrix switch means and a control signal detector means. There is a matrix switch means for receiving the programming from the receiver/distribution means and for directing selected portions of the received programming to a recording device operatively connected to a multichannel television distribution means. A control signal detector means detects control signals respecting the programming and transfers the control signals to a storage/transfer means. The control signal detector means is configured to detect the control signals in a predetermined frequency range or at

predetermined locations within the programming. A storage/transfer means receives and stores the control signals and transfers at least a portion of the control signals for further processing. A processor means controls the directing functions of the matrix switch means and the transfer functions of the storage/transfer means in response to the control signals or on local command.

Claim 9 of U.S. Pat. No. 5,109,414	Specification Support
9. In a multichannel television distribution system,	For the 1981 specification, please refer to Figs. 3A-C, as described from column 10 line 24 to column 12 line 67. For the 1987 specification, please refer to Figs. 6A-6B, as described from pages 324 to 374.
a receiver/distributor means for receiving television programmingfrom a plurality of program sources and directing said programming to	Distribution amplifiers 63-70.
a matrix switch means and	Matrix switch 75.
a control signal detector means,	Signal processor 71.
a matrix switch means for receiving said programming from said receiver/distribution means and for directing selected portions of said received programming to a recording device	*See* column 11 line 44 to column 12 line 12. Video recorder and players 76 & 78.
operatively connected to a multichannel television distribution means,	Cable field distribution system 93.
a control signal detector means for detecting	Signal processor 71.
control signals respecting said programming and transferring said control signals	Column 11 lines 3-11.
to a storage/transfer means,	Cable program and controller 73.
said control signal detector means being configured to detect said control signals in a predetermined frequency range or at predetermined locations within said programming,	*See* column 11 lines 3-11.
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	Cable program and controller 73. *See* column 11 lines 3-11.
a processor means for controlling the directing functions of said matrix switch means and the	Cable program and controller 73.

transfer functions of said storage/transfer means in response to said control signals or on local command.	See column 11 line 44 to column 12 line 12.

Claim 12 of the '414 patent is generally directed to a multichannel television distribution system in which a receiver/distribution means receives television programming from a plurality of program sources and outputs the programming to a matrix switch means and a control signal detector and processor means. A matrix switch means receives the programming from the plurality of receiver/distribution means and outputs selected portions of the received programming to a multichannel television distribution means. A control signal detector and processor means detects the control signal respecting the programming and transfers the control signals to a storage/transfer means. The control signal detector and processor means is configured to detect the control signals in specified frequency ranges or at specified locations within the programming. The control signal detector and processor means controls the particular ranges and locations wherein the control signals are directed. A storage/transfer means receives and stores the control signals and transfers at least a portion of the control signals for further processing. A processor means controls the output functions of the matrix switch means and the transfer functions of the storage/transfer means in response to the control signals or on local command.

Claim 12 of U.S. Pat. No. 5,109,414	Specification Support
12. In a multichannel television distribution system,	For the 1981 specification, please refer to Figs. 3A-C, as described from column 10 line 24 to column 12 line 67. For the 1987 specification, please refer to Figs. 6A-6B, as described from pages 324 to 374.
a plurality of receiver/distribution means for receiving television programming from a plurality of program sources and	Distribution amplifiers 63-70.

outputting said programming to a matrix switch means and a control signal detector and processor means,	Matrix switch 75. Signal processor 71.
a matrix switch means for receiving said programming from said plurality of receiver/distribution means and for outputting selected portions of said received programming to a multichannel television distribution means,	Matrix switch 75. Distribution amplifiers 63-70. Cable field distribution system 93.
a control signal detector and processor means for detecting control signal respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector and processor means being configured to detect said control signals in specified frequency ranges or at specified locations within said programming, said control signal detector and processor means controlling the particular ranges and locations wherein said control signals are detected,	Signal processor 71. *See* column 11 lines 3-11.
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	Cable program and controller 73. *See* column 11 lines 3-11.
a processor means for controlling the output functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or local command.	Cable program and controller 73. *See* column 11 line 44 to column 12 line 12.

b. Analysis of Claim 3 with Claim 9 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 9 of U.S. Pat. No. 5,109,414	Claim 3
9. In a multichannel television distribution system,	3. A method of controlling a remote station based on a broadcast or cablecast transmission, said method comprising the steps of:
a receiver/distributor means for receiving television programmingfrom a plurality of program sources and directing said programming to a matrix switch means and a control signal detector means, a matrix switch	(a) receiving a control signal from a first remote station;

means for receiving said programming from said receiver/distribution means and for directing selected portions of said received programming to a recording device operatively connected to a multichannel television distribution means,	
a control signal detector means for detecting control signals respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector means being configured to detect said control signals in a predetermined frequency range or at predetermined locations within said programming,	(b) passing said control signal to a computer and causing said computer to compute a variable value in response to said control signal;
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	(c) generating, based on said computed variable value, an instruction module comprising executable code, said generated instruction module to be transferred to a memory at a second remote station and executed upon command;
a processor means for controlling the directing functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or on local command.	(d) embedding said generated instruction module into an information transmission to be broadcast or cablecast; and
	(e) transmitting said information transmission to said second remote station in a broadcast or cablecast transmission.

(2) Patentable Distinctions of Claim 3 over Claim 9 of U.S. Pat. No. 5,109,414.

Claim 3 of the present application has as patentable distinctions over the disclosure of claim 9 of the '414 patent:

a method of controlling a remote station based on a broadcast or cablecast transmission;

passing said control signal to a computer and causing said computer to compute a variable value in response to said control signal;

generating, based on said computed variable value, an instruction module comprising executable code, said generated instruction module to be transferred to a memory at a second remote station and executed upon command;

embedding said generated instruction module into an information transmission to be broadcast or cablecast; and

transmitting said information transmission to said second remote station in a broadcast or cablecast transmission.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 3 of the present application claims a method of controlling a remote station based on a broadcast or cablecast transmission. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the time of the invention would have possessed that would render claim 3 an obvious variation over the invention defined by claim 9 of the '414 patent. There is simply no suggestion that the multichannel television distribution system as disclosed in claim 9 performs, *inter alia*, generating, based on said computed variable value, an instruction module comprising executable code, said generated instruction module to be transferred to a memory at a second remote station and executed upon command and embedding said generated instruction module into an information transmission to be broadcast or cablecast as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 3 of the present application is not obvious over the invention defined by claim 9 of the '414 patent in light of the prior art.

c. Analysis of Claim 11 with Claim 9 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 9 of U.S. Pat. No. 5,109,414	Claim 11
9. In a multichannel television distribution system,	11. A remote station, comprising:
a receiver/distributor means for receiving television programmingfrom a plurality of program sources and directing said programming to a matrix switch means and a control signal detector means, a matrix switch means for receiving said programming from said receiver/distribution means and for directing selected portions of said received programming to a recording device operatively connected to a multichannel television distribution means,	(a) receiving means for receiving a control signal from a first remote station;
a control signal detector means for detecting control signals respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector means being configured to detect said control signals in a predetermined frequency range or at predetermined locations within said programming,	(b) computation means coupled to said receiving means;
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	(c) transmission means for passing said control signal to said computation means, wherein said computation means computes a variable value in response to said control signal and generates, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a second remote station and executed upon command;
a processor means for controlling the directing functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or on local command.	(d) embedding means for embedding said generated at least a portion of said instruction module into an information transmission to be broadcast or cablecast; and
	(e) broadcast transmission means for transmitting said information transmission to said second remote station in a broadcast or cablecast transmission.

(2) Patentable Distinctions of Claim 11 over Claim 9 of U.S. Pat. No. 5,109,414.

Claim 11 of the present application has as patentable distinctions over the disclosure of claim 9 of the '414 patent:

a remote station, comprising:

transmission means for passing said control signal to said computation means, wherein said computation means computes a variable value in response to said control signal and generates, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a second remote station and executed upon command;

embedding means for embedding said generated at least a portion of said instruction module into an information transmission to be broadcast or cablecast; and

broadcast transmission means for transmitting said information transmission to said second remote station in a broadcast or cablecast transmission.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 11 of the present application claims a remote station. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the time of the invention would have possessed that would render claim 11 an obvious variation over the invention defined by claim 9 of the '414 patent. There is simply no suggestion that the multichannel television distribution system as disclosed in claim 9 comprises, *inter alia*, transmission means for passing said control signal to said computation means, wherein said computation means computes a variable value in response to said control signal and generates, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction

module to be transferred to a memory at a second remote station and executed upon command, as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 11 of the present application is not obvious over the invention defined by claim 9 of the '414 patent in light of the prior art.

d. Analysis of Claim 12 with Claim 9 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 9 of U.S. Pat. No. 5,109,414	Claim 12
9. In a multichannel television distribution system,	12. A method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:
a receiver/distributor means for receiving television programmingfrom a plurality of program sources and directing said programming to a matrix switch means and a control signal detector means, a matrix switch means for receiving said programming from said receiver/distribution means and for directing selected portions of said received programming to a recording device operatively connected to a multichannel television distribution means,	receiving at least one instruct signal which is effective to cause a first remote station to generate at least a portion of a control signal which is effective to cause a second remote station to compute a variable value in response to said control signal and generate, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a third remote station and executed upon command;
a control signal detector means for detecting control signals respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector means being configured to detect said control signals in a predetermined frequency range or at predetermined locations within said programming,	receiving at least one transmitter control signal which operates at said second remote station to embed said generated at least a portion of said instruction module into an information transmission to be broadcast or cablecast, and transmit said information transmission to said third remote station in a broadcast or cablecast transmission; and
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	transmitting said at least one instruct signal and said at least one transmitter control signal to said first remote station.
a processor means for controlling the directing functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or on local command.	

(2) Patentable Distinctions of Claim 12 over Claim 9 of U.S. Pat. No. 5,109,414.

Claim 12 of the present application has as patentable distinctions over the disclosure of claim 9 of the '414 patent:

a method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:

receiving at least one instruct signal which is effective to cause a first remote station to generate at least a portion of a control signal which is effective to cause a second remote station to compute a variable value in response to said control signal and generate, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a third remote station and executed upon command;

receiving at least one transmitter control signal which operates at said second remote station to embed said generated at least a portion of said instruction module into an information transmission to be broadcast or cablecast, and transmit said information transmission to said third remote station in a broadcast or cablecast transmission; and

transmitting said at least one instruct signal and said at least one transmitter control signal to said first remote station.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 12 of the present application claims a method of controlling a remote station based on a broadcast or cablecast transmission. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the time of the invention would have possessed that would render claim 12 an

obvious variation over the invention defined by claim 9 of the '414 patent. There is simply no suggestion that the multichannel television distribution system disclosed in claim 9 performs, *inter alia*, receiving at least one instruct signal which is effective to cause a first remote station to generate at least a portion of a control signal which is effective to cause a second remote station to compute a variable value in response to said control signal and generate, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a third remote station and executed upon command as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 12 of the present application is not obvious over the invention defined by claim 9 of the '414 patent in light of the prior art.

e. Analysis of Claim 13 with Claim 9 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 9 of U.S. Pat. No. 5,109,414	Claim 13
9. In a multichannel television distribution system,	13. A method of controlling a remote station, comprising the steps of:
a receiver/distributor means for receiving television programmingfrom a plurality of program sources and directing said programming to a matrix switch means and a control signal detector means, a matrix switch means for receiving said programming from said receiver/distribution means and for directing selected portions of said received programming to a recording device operatively connected to a multichannel television distribution means,	generating at least a control portion of at least one control signal, said at least one control signal effective to cause said remote station to (1) compute a variable value in response to said at least one control signal, (2) generate, based on said variable value, at least a control portion of an instruction module comprising executable code, said at least a control portion of said instruction module to be transferred to a memory at a subscriber station and executed upon command, and (3) transmit said at least said control portion of said generated instruction module in a broadcast or cablecast transmission; and
a control signal detector means for detecting control signals respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector means being configured to detect said	transmitting said at least one control signal to said remote station in an information transmission which contains video.

control signals in a predetermined frequency range or at predetermined locations within said programming,	
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	
a processor means for controlling the directing functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or on local command.	

(2) Patentable Distinctions of Claim 13 over Claim 9 of U.S. Pat. No. 5,109,414.

Claim 13 of the present application has as patentable distinctions over the disclosure of claim 9 of the '414 patent:

a method of controlling a remote station, comprising the steps of:

generating at least a control portion of at least one control signal, said at least one control signal effective to cause said remote station to (1) compute a variable value in response to said at least one control signal, (2) generate, based on said variable value, at least a control portion of an instruction module comprising executable code, said at least a control portion of said instruction module to be transferred to a memory at a subscriber station and executed upon command, and (3) transmit said at least said control portion of said generated instruction module in a broadcast or cablecast transmission; and

transmitting said at least one control signal to said remote station in an information transmission which contains video.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 13 of the present application claims a method of controlling a remote station. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the time of the invention would have possessed that would render claim 13 an obvious variation over the invention defined by claim 9 of the '414 patent. There is simply no suggestion that the multichannel television distribution system as disclosed in claim 9, *inter alia*, generates at least a control portion of at least one control signal, said at least one control signal effective to cause said remote station to (1) compute a variable value in response to said at least one control signal, (2) generate, based on said variable value, at least a control portion of an instruction module comprising executable code, said at least a control portion of said instruction module to be transferred to a memory at a subscriber station and executed upon command, and (3) transmit said at least said control portion of said generated instruction module in a broadcast or cablecast transmission as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 13 of the present application is not obvious over the invention defined by claim 9 of the '414 patent in light of the prior art.

f. Analysis of Claim 14 with Claim 9 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 9 of U.S. Pat. No. 5,109,414	Claim 14
9. In a multichannel television distribution system,	14. A method of controlling a remote station based on a broadcast or cablecast transmission,

	comprising the steps of:
a receiver/distributor means for receiving television programming from a plurality of program sources and directing said programming to a matrix switch means and a control signal detector means, a matrix switch means for receiving said programming from said receiver/distribution means and for directing selected portions of said received programming to a recording device operatively connected to a multichannel television distribution means,	(1) receiving an information transmission to be broadcast or cablecast;
a control signal detector means for detecting control signals respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector means being configured to detect said control signals in a predetermined frequency range or at predetermined locations within said programming,	(2) receiving at least one instruct signal which is effective to accomplish: (a) effecting a transmitter station to generate at least a portion of at least one first control signal, said at least one first control signal effective to cause said remote station to compute a variable value in response to said at least one first control signal, generate, based on said variable value, at least a portion of an instruction module comprising executable code, said at least a portion of said instruction module to be transferred to a memory at said remote station and executed upon command, and transmit said generated at least a portion of said instruction module in said broadcast or cablecast transmission; and (b) effecting said remote station to generate at least a portion of at least one second control signal, said at least one second control signal effective to cause a subscriber station at said remote station to compute a variable value in response to said at least one second control signal, generate at least a portion of a module based on said variable value, and transmit said module upon command;
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	(3) receiving at least one transmitter control signal which operates at said transmitter station to communicate at least one of (i) said at least one instruct signal and (ii) said at least one first control signal to a transmitter; and
a processor means for controlling the directing functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or on local command.	(4) transmitting said information transmission, said at least one instruct signal, and said at least one transmitter control signal to at least one of said transmitter station and said remote station.

(2) Patentable Distinctions of Claim 14 over Claim 9 of U.S. Pat. No. 5,109,414.

Claim 14 of the present application has as patentable distinctions over the disclosure of claim 9 of the '414 patent:

a method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:

receiving at least one instruct signal which is effective to accomplish:

effecting a transmitter station to generate at least a portion of at least one first control signal, said at least one first control signal effective to cause said remote station to compute a variable value in response to said at least one first control signal, generate, based on said variable value, at least a portion of an instruction module comprising executable code, said at least a portion of said instruction module to be transferred to a memory at said remote station and executed upon command, and transmit said generated at least a portion of said instruction module in said broadcast or cablecast transmission; and

effecting said remote station to generate at least a portion of at least one second control signal, said at least one second control signal effective to cause a subscriber station at said remote station to compute a variable value in response to said at least one second control signal, generate at least a portion of a module based on said variable value, and transmit said module upon command;

receiving at least one transmitter control signal which operates at said transmitter station to communicate at least one of (i) said at least one instruct signal and (ii) said at least one first control signal to a transmitter; and

transmitting said information transmission, said at least one instruct signal, and said at least one transmitter control signal to at least one of said transmitter station and said remote station.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 14 of the present application claims a method of controlling a remote station based on a broadcast or cablecast transmission. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the time of the invention would have possessed that would render claim 14 an obvious variation over the invention defined by claim 9 of the '414 patent. There is simply no suggestion that the multichannel television distribution system as disclosed in claim 9, *inter alia*, receiving at least one instruct signal which is effective to accomplish: effecting a transmitter station to generate at least a portion of at least one first control signal, said at least one first control signal effective to cause said remote station to compute a variable value in response to said at least one first control signal, generate, based on said variable value, at least a portion of an instruction module comprising executable code, said at least a portion of said instruction module to be transferred to a memory at said remote station and executed upon command, and transmit said generated at least a portion of said instruction module in said broadcast or cablecast transmission...., as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 14 of the present application is not obvious over the invention defined by claim 9 of the '414 patent in light of the prior art.

g. Analysis of Claim 3 with Claim 12 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 12 of U.S. Pat. No. 5,109,414	Claim 3
12. In a multichannel television distribution system,	3. A method of controlling a remote station based on a broadcast or cablecast transmission, said method comprising the steps of:
a plurality of receiver/distribution means for receiving television programming from a plurality of program sources and outputting said programming to a matrix switch means and a control signal detector and processor means,	(a) receiving a control signal from a first remote station;
a matrix switch means for receiving said programming from said plurality of receiver/distribution means and for outputting selected portions of said received programming to a multichannel television distribution means,	(b) passing said control signal to a computer and causing said computer to compute a variable value in response to said control signal;
a control signal detector and processor means for detecting control signal respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector and processor means being configured to detect said control signals in specified frequency ranges or at specified locations within said programming, said control signal detector and processor means controlling the particular ranges and locations wherein said control signals are detected,	(c) generating, based on said computed variable value, an instruction module comprising executable code, said generated instruction module to be transferred to a memory at a second remote station and executed upon command;
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	(d) embedding said generated instruction module into an information transmission to be broadcast or cablecast; and
a processor means for controlling the output functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or local command.	(e) transmitting said information transmission to said second remote station in a broadcast or cablecast transmission.

(2) Patentable Distinctions of Claim 3 over Claim 12 of U.S. Pat. No. 5,109,414.

Claim 3 of the present application has as patentable distinctions over the disclosure of claim 12 of the '414 patent:

a method of controlling a remote station based on a broadcast or cablecast transmission;

passing said control signal to a computer and causing said computer to compute a variable value in response to said control signal;

generating, based on said computed variable value, an instruction module comprising executable code, said generated instruction module to be transferred to a memory at a second remote station and executed upon command;

embedding said generated instruction module into an information transmission to be broadcast or cablecast; and

transmitting said information transmission to said second remote station in a broadcast or cablecast transmission.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 3 of the present application claims a method of controlling a remote station based on a broadcast or cablecast transmission. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the time of the invention would have possessed that would render claim 3 an obvious variation over the invention defined by claim 12 of the '414 patent. There is simply no suggestion that the multichannel television distribution system as disclosed in claim 12 performs, *inter alia*, generating, based on said computed variable value, an instruction module comprising executable code, said generated instruction module to be transferred to a memory at a second remote station and executed

upon command and embedding said generated instruction module into an information transmission to be broadcast or cablecast as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 3 of the present application is not obvious over the invention defined by claim 12 of the '414 patent in light of the prior art.

h. Analysis of Claim 11 with Claim 12 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 12 of U.S. Pat. No. 5,109,414	Claim 11
12. In a multichannel television distribution system,	11. A remote station, comprising:
a plurality of receiver/distribution means for receiving television programming from a plurality of program sources and outputting said programming to a matrix switch means and a control signal detector and processor means,	(a) receiving means for receiving a control signal from a first remote station;
a matrix switch means for receiving said programming from said plurality of receiver/distribution means and for outputting selected portions of said received programming to a multichannel television distribution means,	(b) computation means coupled to said receiving means;
a control signal detector and processor means for detecting control signal respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector and processor means being configured to detect said control signals in specified frequency ranges or at specified locations within said programming, said control signal detector and processor means controlling the particular ranges and locations wherein said control signals are detected,	(c) transmission means for passing said control signal to said computation means, wherein said computation means computes a variable value in response to said control signal and generates, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a second remote station and executed upon command;
a storage/transfer means for receiving and	(d) embedding means for embedding said

storing said control signals and for transferring at least a portion of said control signals for further processing, and	generated at least a portion of said instruction module into an information transmission to be broadcast or cablecast; and
a processor means for controlling the output functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or local command.	(e) broadcast transmission means for transmitting said information transmission to said second remote station in a broadcast or cablecast transmission.

(2) Patentable Distinctions of Claim 11 over Claim 12 of U.S. Pat. No. 5,109,414.

Claim 11 of the present application has as patentable distinctions over the disclosure of claim 12 of the '414 patent:

a remote station, comprising;

transmission means for passing said control signal to said computation means, wherein said computation means computes a variable value in response to said control signal and generates, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a second remote station and executed upon command;

embedding means for embedding said generated at least a portion of said instruction module into an information transmission to be broadcast or cablecast; and

broadcast transmission means for transmitting said information transmission to said second remote station in a broadcast or cablecast transmission.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 11 of the present application claims a remote station. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the

time of the invention would have possessed that would render claim 11 an obvious variation over the invention defined by claim 12 of the '414 patent. There is simply no suggestion that the multichannel television distribution system as disclosed in claim 12 comprises, *inter alia*, transmission means for passing said control signal to said computation means, wherein said computation means computes a variable value in response to said control signal and generates, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a second remote station and executed upon command, as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 11 of the present application is not obvious over the invention defined by claim 12 of the '414 patent in light of the prior art.

i. Analysis of Claim 12 with Claim 12 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 12 of U.S. Pat. No. 5,109,414	Claim 12
12. In a multichannel television distribution system,	12. A method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:
a plurality of receiver/distribution means for receiving television programming from a plurality of program sources and outputting said programming to a matrix switch means and a control signal detector and processor means,	receiving at least one instruct signal which is effective to cause a first remote station to generate at least a portion of a control signal which is effective to cause a second remote station to compute a variable value in response to said control signal and generate, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a third remote station and executed upon command;
a matrix switch means for receiving said programming from	receiving at least one transmitter control signal which operates at said second remote station to

said **plurality of receiver/distribution means** and for outputting selected portions of said received programming to a **multichannel television distribution means,**	embed said generated at least a portion of said instruction module into an information transmission to be broadcast or cablecast, and transmit said information transmission to said third remote station in a broadcast or cablecast transmission; and
a **control signal detector and processor means** for detecting control signal respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector and processor means being configured to detect said control signals in specified frequency ranges or at specified locations within said programming, said control signal detector and processor means controlling the particular ranges and locations wherein said control signals are detected,	transmitting said at least one instruct signal and said at least one transmitter control signal to said first remote station.
a **storage/transfer means** for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	
a **processor means** for controlling the output functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or local command.	

(2) Patentable Distinctions of Claim 12 over Claim 12 of U.S. Pat. No. 5,109,414.

Claim 12 of the present application has as patentable distinctions over the disclosure of claim 12 of the '414 patent:

a method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:

receiving at least one instruct signal which is effective to cause a first remote station to generate at least a portion of a control signal which is effective to cause a second remote station to compute a variable value in response to said control signal and generate, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at

least a portion of said instruction module to be transferred to a memory at a third remote station and executed upon command;

receiving at least one transmitter control signal which operates at said second remote station to embed said generated at least a portion of said instruction module into an information transmission to be broadcast or cablecast, and transmit said information transmission to said third remote station in a broadcast or cablecast transmission; and

transmitting said at least one instruct signal and said at least one transmitter control signal to said first remote station.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 12 of the present application claims a method of controlling a remote station based on a broadcast or cablecast transmission. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the time of the invention would have possessed that would render claim 12 an obvious variation over the invention defined by claim 12 of the '414 patent. There is simply no suggestion that the multichannel television distribution system disclosed in claim 12 performs, *inter alia*, receiving at least one instruct signal which is effective to cause a first remote station to generate at least a portion of a control signal which is effective to cause a second remote station to compute a variable value in response to said control signal and generate, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a third remote station and executed upon command as the instant claim specifies. For this reason, *inter alia*, given the

patentable distinctions as outlined above, claim 12 of the present application is not obvious over the invention defined by claim 12 of the '414 patent in light of the prior art.

j. Analysis of Claim 13 with Claim 12 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 12 of U.S. Pat. No. 5,109,414	Claim 13
12. In a multichannel television distribution system,	13. A method of controlling a remote station, comprising the steps of:
a plurality of receiver/distribution means for receiving television programming from a plurality of program sources and outputting said programming to a matrix switch means and a control signal detector and processor means,	generating at least a control portion of at least one control signal, said at least one control signal effective to cause said remote station to (1) compute a variable value in response to said at least one control signal, (2) generate, based on said variable value, at least a control portion of an instruction module comprising executable code, said at least a control portion of said instruction module to be transferred to a memory at a subscriber station and executed upon command, and (3) transmit said at least said control portion of said generated instruction module in a broadcast or cablecast transmission; and
a matrix switch means for receiving said programming from said plurality of receiver/distribution means and for outputting selected portions of said received programming to a multichannel television distribution means,	transmitting said at least one control signal to said remote station in an information transmission which contains video.
a control signal detector and processor means for detecting control signal respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector and processor means being configured to detect said control signals in specified frequency ranges or at specified locations within said programming, said control signal detector and processor means controlling the particular ranges and locations	

wherein said control signals are detected,	
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	
a processor means for controlling the output functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or local command.	

(2) Patentable Distinctions of Claim 13 over Claim 12 of U.S. Pat. No. 5,109,414.

Claim 13 of the present application has as patentable distinctions over the disclosure of claim 12 of the '414 patent:

a method of controlling a remote station, comprising the steps of:

generating at least a control portion of at least one control signal, said at least one control signal effective to cause said remote station to (1) compute a variable value in response to said at least one control signal, (2) generate, based on said variable value, at least a control portion of an instruction module comprising executable code, said at least a control portion of said instruction module to be transferred to a memory at a subscriber station and executed upon command, and (3) transmit said at least said control portion of said generated instruction module in a broadcast or cablecast transmission; and

transmitting said at least one control signal to said remote station in an information transmission which contains video.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 13 of the present application claims a method of controlling a remote station. There is no teaching in the prior art nor any knowledge one of

ordinary skill in the art at the time of the invention would have possessed that would render claim 13 an obvious variation over the invention defined by claim 12 of the '414 patent. There is simply no suggestion that the multichannel television distribution system as disclosed in claim 12, *inter alia*, generates at least a control portion of at least one control signal, said at least one control signal effective to cause said remote station to (1) compute a variable value in response to said at least one control signal, (2) generate, based on said variable value, at least a control portion of an instruction module comprising executable code, said at least a control portion of said instruction module to be transferred to a memory at a subscriber station and executed upon command, and (3) transmit said at least said control portion of said generated instruction module in a broadcast or cablecast transmission as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 13 of the present application is not obvious over the invention defined by claim 12 of the '414 patent in light of the prior art.

k. Analysis of Claim 14 with Claim 12 of U.S. Pat. No. 5,109,414.

(1) Claim Comparison Chart

Claim 12 of U.S. Pat. No. 5,109,414	Claim 14
12. In a multichannel television distribution system,	14. A method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:
a plurality of receiver/distribution means for receiving television programming from a plurality of program sources and outputting said programming to a matrix switch means and a control signal detector and processor means,	(1) receiving an information transmission to be broadcast or cablecast;
a matrix switch means for receiving said	(2) receiving at least one instruct signal which is

programming from said plurality of receiver/distribution means and for outputting selected portions of said received programming to a multichannel television distribution means,	effective to accomplish: (a) effecting a transmitter station to generate at least a portion of at least one first control signal, said at least one first control signal effective to cause said remote station to compute a variable value in response to said at least one first control signal, generate, based on said variable value, at least a portion of an instruction module comprising executable code, said at least a portion of said instruction module to be transferred to a memory at said remote station and executed upon command, and transmit said generated at least a portion of said instruction module in said broadcast or cablecast transmission; and (b) effecting said remote station to generate at least a portion of at least one second control signal, said at least one second control signal effective to cause a subscriber station at said remote station to compute a variable value in response to said at least one second control signal, generate at least a portion of a module based on said variable value, and transmit said module upon command;
a control signal detector and processor means for detecting control signal respecting said programming and transferring said control signals to a storage/transfer means, said control signal detector and processor means being configured to detect said control signals in specified frequency ranges or at specified locations within said programming, said control signal detector and processor means controlling the particular ranges and locations wherein said control signals are detected,	(3) receiving at least one transmitter control signal which operates at said transmitter station to communicate at least one of (i) said at least one instruct signal and (ii) said at least one first control signal to a transmitter; and
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals for further processing, and	(4) transmitting said information transmission, said at least one instruct signal, and said at least one transmitter control signal to at least one of said transmitter station and said remote station.
a processor means for controlling the output functions of said matrix switch means and the transfer functions of said storage/transfer means in response to said control signals or local command.	

(2) Patentable Distinctions of Claim 14 over Claim 12 of U.S. Pat. No. 5,109,414.

Claim 14 of the present application has as patentable distinctions over the disclosure of claim 12 of the '414 patent:

a method of controlling a remote station based on a broadcast or cablecast transmission, comprising the steps of:

receiving at least one instruct signal which is effective to accomplish:

effecting a transmitter station to generate at least a portion of at least one first control signal, said at least one first control signal effective to cause said remote station to compute a variable value in response to said at least one first control signal, generate, based on said variable value, at least a portion of an instruction module comprising executable code, said at least a portion of said instruction module to be transferred to a memory at said remote station and executed upon command, and transmit said generated at least a portion of said instruction module in said broadcast or cablecast transmission; and

effecting said remote station to generate at least a portion of at least one second control signal, said at least one second control signal effective to cause a subscriber station at said remote station to compute a variable value in response to said at least one second control signal, generate at least a portion of a module based on said variable value, and transmit said module upon command;

receiving at least one transmitter control signal which operates at said transmitter station to communicate at least one of (i) said at least one instruct signal and (ii) said at least one first control signal to a transmitter; and

transmitting said information transmission, said at least one instruct signal, and said at least one transmitter control signal to at least one of said transmitter station and said remote station.

(3) Reasons Patentable Distinctions would not be Obvious to One Having Ordinary Skill in the Art at the Time of the Invention.

Claim 14 of the present application claims a method of controlling a remote station based on a broadcast or cablecast transmission. There is no teaching in the prior art nor any knowledge one of ordinary skill in the art at the time of the invention would have possessed that would render claim 14 an obvious variation over the invention defined by claim 12 of the '414 patent. There is simply no suggestion that the multichannel television distribution system as disclosed in claim 12, *inter alia*, receiving at least one instruct signal which is effective to accomplish: effecting a transmitter station to generate at least a portion of at least one first control signal, said at least one first control signal effective to cause said remote station to compute a variable value in response to said at least one first control signal, generate, based on said variable value, at least a portion of an instruction module comprising executable code, said at least a portion of said instruction module to be transferred to a memory at said remote station and executed upon command, and transmit said generated at least a portion of said instruction module in said broadcast or cablecast transmission...., as the instant claim specifies. For this reason, *inter alia*, given the patentable distinctions as outlined above, claim 14 of the present application is not obvious over the invention defined by claim 12 of the '414 patent in light of the prior art.

C. General Overview and Summary of Applicants' 1987 Disclosure

While the Examiners suggest that Applicants' 1987 disclosure may appear to contain a series of isolated examples, Applicants maintain that their examples are carefully tied together. An essential feature of Applicants' disclosure in the specification is that they explain their invention and the various embodiments thereof and their interrelationship. The following description provides the complete context of the disclosure, illuminating important timing and error correction considerations and explaining the interrelationship of Applicants' full system.

One clear series of teachings is focused around the "Wall Street Week" combined image of Fig. 1C. A first part of this image is received in a television signal. Fig. 1B shows this first part. A second part, Fig. 1A, is generated at the viewer station by processing data, which exists at the viewer station, in response to control instructions which are detected in the television signal. In a section entitled "One Combined Medium" (pages 19-28) at the beginning of the Description of the Preferred Embodiments, a sequence of events associated with the display of Fig. 1C is disclosed. A first series of instructions invoke broadcast control (defined at page 23 lines 24-26), which includes clearing video RAM. A second series of instructions construct the Fig. 1A image at video RAM. The Fig. 1B image is received in the "Wall Street Week" program, and is explained by the program host as showing the performance of the Dow Industrials. When the host says, "And here is what your portfolio did," an instruction in the television signal executes "GRAPHICS ON" which combines the Figs. 1A and 1B images and displays Fig. 1C. After an interval of time during which corresponding personalized programming is displayed simultaneously to every properly equipped member of the "Wall Street Week" audience, an instruction executes

"GRAPHICS OFF" and causes Fig. 1A no longer to be displayed. The disclosure defines "combining synch command" at page 26 lines 20-24, and explains that instructions that construct the Fig. 1A, execute "GRAPHICS ON", and execute "GRAPHICS OFF" each comprise a combining synch command. Subsequently, these are referred to throughout the disclosure as the **"first", "second", and "third combining synch commands of the 'Wall Street Week' example".**

After providing a detailed disclosure of apparatus of the invention (called "SPAM" apparatus) and of the composition of messages and message streams, four examples, between pages 108 and 248, disclose alternate ways of processing the first, second, and third combining synch commands of the 'Wall Street Week' example. These examples reference Fig. 3. Example #1 describes transferring the messages to an addressed controller and causing the controller to respond. Examples #2 and #4 disclose alternate decryption techniques whereby portions of the message stream containing the three combining synch commands are selectively decrypted. Examples #3 and #4, which reference Fig. 3A as the controller of decoders 203 and 205C, disclose the collection of metering data (e.g., for billing purposes) and monitoring data (e.g., for TV viewership ratings) based on content of the first two combining synch commands. Each example discloses control of a sequence of events, and describes carefully how its sequence occurs within the broader context of "One Combined Medium" at pages 19-28. Specifically each of examples #1, #2, #3, and #4 elaborates on the portion of "One Combined Medium" from page 24 line 1 to page 27 line 7. In these four examples, each later example builds upon concepts disclosed and definitions provided in the earlier examples.

Example #5 (pages 248-271) focuses on functions performed by Signal Processor 200 in Fig. 3 *concurrently with* the sequence of events described in "One Combined Medium" *and at apparatus which perform* the metering and monitoring

of examples #3 and #4. The first combining synch command of the "Wall Street Week" example is also processed in example #5. Example #5 introduces concepts that are subsequently used (e.g., in example #7) to teach automatic selection of programming, including the "Wall Street Week" program itself. At pages 271-278, the disclosure explains how the metering and monitoring, in particular of the first combining synch command of the "Wall Street Week" example, causes the content of recorder 16 to exceed a predetermined level which causes the Signal Processor to telephone a remote data collection station and dump the content of recorder 16 to the remote station.

Example #7, which occurs at pages 288-312 and 427-447 and incorporates concepts of example #6, teaches selection of the "Wall Street Week" program itself, interconnection of subscriber station apparatus to provide station specific processing *alternatives* based on pre-stored instructions, and decryption of the "Wall Street Week" program transmission. The disclosure teaches (e.g., page 311 lines 10-16) how this causes the station (now of Fig. 4 or Fig. 7 which are subscriber stations of the intermediate transmission station of Fig. 6) to perform the functions "One Combined Medium" and examples #1-#4.

The disclosure also cites (pages 322-333) and sites the "Wall Street Week" monitoring and metering functions within the extended Fig. 5 monitoring disclosed at pages 312-314.

In "Controlling Computer-Based Combined Media Operations" (pages 447-457), the disclosure teaches how the "Wall Street Week" subscriber portfolio contents and stock price data come to be up-to-date when the program begins, teaches that the Fig. 1C combining is the first of a series of overlays, teaches error detection techniques to prevent the display of incorrect or incomplete overlays, and teaches error correction techniques to enable slow viewer station computers that fall behind to catch up.

A second clear series of teachings is focused around a television spot commercial called program unit Q.

Within the disclosure of automated intermediate transmission station functionality that begins at page 324, program unit Q is introduced at page 331 lines 21-22 in a passage that teaches organizing units of prerecorded programming to play according to schedule.

Example #8 (pages 340-354) discloses that program unit Q is a television spot commercial and teaches how it is transmitted with other spot commercials from a satellite up-link to automated cable TV head-ends which are caused automatically to select, store, and retransmit the spot commercials at different times and on different channels.

Example #9 (pages 354-374) discloses that program unit Q is a combined medium television spot commercial and teaches how one of the automated head-ends of example #8 creates and transmits according to a schedule a time specific and transmitter specific control signal with data that applies to specials and discounts in a local supermarket at the scheduled time of transmission. The relationship of examples #8 and #9 is discussed at page 355 lines 15-32.

Example #10 (pages 374-390) teaches how the automated head-end (as one of a plurality of such head-ends each) creates the time specific and transmitter specific control signal with data and inserts the control signal into a network broadcast of combined medium program unit Q.

The subscriber station functionalities associated with both examples #9 and #10 (see page 469 line 1) are taught at pages 469-516. Each of a plurality of viewer stations creates receiver specific output in response to the control signal(s) as well as selecting viewer specific output from among the transmitted transmitter specific data. Each outputs its output in a series of time intervals of specific relevance. The relationship of pages 469-514 to pages 324-390 is explicit

and unmistakable in that every disclosure (e.g., 354-374, 374-390, and 469-516) teaches a sequence of more than thirteen messages with matching names. These include, for example, the **"transmit-and-execute-program-instruction-set message"** (page 371 lines 9-10, page 385 lines 7-8, and page 484 lines 1-2) and **"program-instruction-set message"** (page 371 lines 17-19, page 385 lines 14-16, and 484 line 5). Furthermore, corresponding named ones of these messages are disclosed in each respective passage (e.g., 354-374, 374-390, and 469-516) to have functionally identical content and to cause identical functioning at the subscriber stations. The passage at page 514 lines 8-30 states this.

Having disclosed all the individual elements and procedures of their system, Applicants finish their disclosure by describing a cycle in "Summary Example #11". The cycle involves controlling the disclosed system on a large scale to interconnect and distribute information to users, create control signals, create output in response to the control signals, display and explain the information and output, and receive and process feedback in order to repeat the cycle. Important disclosed functions such as preprogramming operating system instructions (page 537), creation of control signals (pages 541-547), creation of output for display (e.g., pages 548-551), display of the output (e.g., middle of page 552 to top of page 554), reception of feedback (pages 555-556), and distribution of new information based on the feedback (page 556) are cited in specific sequence and make clear reference to the pertinent portions of the specification that disclose these important functions.

D. Specification Support of the Claims

Applicants provide the following specification support for all pending claim language per the request of the Examiner.

1. Claim 3

In example #9/#10 of the 1987 patent specification, a cable system head end is scheduled to transmit a supermarket TV commercial and stores data related to the TV commercial. The commercial advertises a product whose price varies from time to time according to changing local supermarket discounts and specials, and the stored data specify the particular discounts and specials that apply at the scheduled time of transmission. The head end receives a control signal (e.g., a control program) from a remote satellite uplink. The control signal causes a computer at the head end to compute values associated with the applicable discounts and specials and incorporate the values into computer code which will control a viewer station to display the commercial to a viewer with relevant personal data of the discounts and specials. The head end generates computer program and data modules that contain the code and data to accomplish the display. At the scheduled time of transmission, the modules are embedded into a multichannel cable signal and transmitted to the viewer station with the commercial.

With regard to the functioning of the transmitter station, claim 3 finds support at pages 374-390 of the specification. The corresponding functionality of the receiver station is supported at pages 468-516. (As explained above in section C the correspondence between these two passages is clear through the use of a narrative sequence in each passage which uses carefully defined message names and processing functions associated with more than thirteen messages.) Claim 3 is also supported independently at pages 354-374 of the specification, although not shown in the table below.

Claim Language	Spec. Reference	Specification Language
A method of controlling a remote station	Page 374 line 29-31	An example #10, focuses on combined medium network control of intermediate transmission stations, controlling ultimate

		receiver stations.
	Page 470 lines 9-10.	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6),
based on a broadcast or cablecast transmission, said method comprising the steps of:	page 324 lines 11-19.	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station
(a) receiving a control signal	Page 375 lines 4-6.	The station of Fig. 6 receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
	Page 378 lines 4-6 with	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message ....
	page 59 lines 29-31;	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
from a first remote station;	page 377 lines 26-34.	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter- monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set-information message (#10)".)
(b) passing said control signal to a computer and	Page 378 lines 4-9;	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations. Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said

		intermediate generation set at particular RAM.
causing said computer to compute a variable value	page 379 lines 6-10;	information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117
in response to said control signal;	page 379 lines 5-6.	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes
(c) generating, based on said computed variable value, an instruction module	Page 379 lines 5-31.	...to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $Y = 1000.00 + 62.21875 + (2.117 * X)$ to select, compute, and replace other variable information until complete program instruction set information exists in higher language code at particular memory; to compile said higher language information; to link the information so complied with other compiled information; and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q.
	Page 364 line 25 through page 365 line 21.	Automatically, computer, 73, selects and computes information of other variables and replaces other variable values of said generally applicable program instruction set information until a complete instance of higher language code of said program instruction set with all required formula-and-item-of-this-transmission information has been generated and exists at particular memory. Automatically, computer, 73,

		compiles the information of said instance and places the resulting so-called "object module" at particular memory (which compiling could be done, in the case of a program written in IBM BASIC, with the IBM BASIC Compiler of the IBM Personal Computer Computer Language Series). Automatically, computer, 73, links the information of said object module with information of other compiled object modules that exist in memory at computer, 73, (and may have been transmitted to computer, 73, in the generally applicable program instruction set information if said intermediate generation set); generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, (which linking could be done, in the case of a program compiled by the IBM BASIC Compiler with the linker program of the IBM Disk Operating System of the IBM Personal Computer Computer Language Series). One of said other compiled object modules is a module that, when accessed in a fashion well known in the art, computes the shortest vehicle driving distance between any two locations in the local vicinity of the station of Fig. 6 when passed two street addresses of said vicinity. (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)
comprising executable code,	Page 379 lines 6-9 with	...information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875;
	page 16 lines 20-23.	Flexibility must exist for expanding the capacity of installed systems by means of transmitted software....
said generated instruction module to be transferred to a memory at a second remote station and executed upon command;	Page 484 lines 12-18.	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message

		(which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
(d) embedding said generated instruction module into an information transmission	Page 386 lines 7-14 with	Receiving the information of the particular program- instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
	page 385 lines 24-34 and	Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal. Said selected and transmitted information that each of said computers, 73, transmits is complete information of the particular program-instruction-set message (#10) of said computer, 73.
	page 382 lines 1-5;	Executing said instruction information causes said computers, 73, each to load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to-transmit and data-set-to-transmit RAM memories of computer, 73,....
to be broadcast or cablecast; and	page 324 lines 11-19.	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station
(e) transmitting said information	Page 386 lines 12-14 and	thereby transmitting the particular program-instruction-set message (#10) of said station

transmission to said second remote station in a broadcast or cablecast transmission.	page 484 lines 1-11;	to said system, 93. Then said studio transmits said transmit-and-execute- program-instruction-set message (#10), causing each intermediate transmission station, including the station of Fig. 6 and said second intermediate transmission station, to transmit its specific program-instruction-set message (#10), as described above. Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job.

2. Claim 4

Claim Language	Spec. Reference	Specification Language
The method of claim 3, further comprising the step of programming said computer to generate at least a portion of said generated instruction module in response to said control signal.	Page 355 lines 18 through page 356 line 13.	Computer, 73, is preprogrammed to process combined medium programming. When the aforementioned remote distribution station inputs information to computer, 73, via network, 98, regarding unit Q, said distribution station inputs information that Q is particular combined medium programming and instructs computer, 73, to commence particular program instruction set generation in a particular fashion at a particular time interval prior to the scheduled playing of Q. (Hereinafter, a particular instance of such a time period is called "interval," as in "interval Q" of unit Q.) Inputting said information and instructions causes Computer, 73, to record said information and instructions in its record keeping fashion together with the scheduled generation time which computer, 73, calculates as the scheduled play time minus interval Q. Prior to the scheduled generation time, particular local-formula-and-item information is inputted to computer, 73, regarding the formulas and items that apply in the case of this particular transmission of Q. (In other words, said local-formula-and-item information reflects specific information such as the particular discounts and cents-off coupon specials that apply at the scheduled time of the transmission of unit Q at the

		particular supermarket or markets that are local to the station of Fig. 6.) Said information may be inputted from local input, 74, or over network, 98, and computer, 73, records said information in a predetermined fashion. Computer program instructions, of the sort well known in the art, are also inputted to computer, 73, and computer, 73, is caused to execute said instructions. Executing said instructions causes computer, 73, to generate information of a program instruction set.

3. Claim 5

Claim Language	Spec. Reference	Specification Language
The method of claim 3, further comprising the step of placing said computed variable value into higher language code.	Page 379 lines 10-19.	to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $Y = 1000.00 + 62.21875 + (2.117 * X)$ to select, compute, and replace other variable information until complete program instruction set information exists in higher language code at particular memory;....
	Page 361 lines 14-18.	The cost of a unit of pork belly product for any given subscriber is computed according to a particular formula: $Y = a + b + c(X)$ (1)

4. Claim 6

Claim Language	Spec. Reference	Specification Language
The method of claim 3, wherein at least some of said generated instruction module is generated by compiling higher language code.	Page 379 lines 19-20 and lines 26-31.	to compile said higher language information; In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the

		particular time of the network transmission of Q.

5. Claim 7

Claim Language	Spec. Reference	Specification Language
The method of claim 6, further comprising the step of linking at least some of said generated instruction module.	Page 379 lines 20-21.	to link the information so complied with other compiled information;

6. Claim 8

Claim Language	Spec. Reference	Specification Language
The method of claim 3, wherein said generated instruction module is transmitted with a data module and	Page 380 lines 5-6;	said computer, 73, generates said data module set of Q.1.
said step of generating said instruction module further comprises the steps of:	Page 379 line 31 to page 380 line 6.	In precisely the fashion that applied in example #9, executing the information of said intermediate generation set causes said computer, 73, to select data, from among the local-formula-and-item information of said station, including the aforementioned "Nabisco Zweiback Teething Toast" and the street address of every one of said supermarket chain's markets in the local vicinity of the station of Fig. 6, and to record said selected data on said memory disk in a data file named DATA_OF.ITS. In so doing, said computer, 73, generates said data module set of Q.1.
selecting some generally applicable	Page 357 lines 21-24.	Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific.
video,	Page 366 lines 4-6.	binary video image information of several telephone numbers,
audio,	Page 494 lines 3-8.	So determining causes said microcomputer, 205, in said predetermined fashion, to select particular sound image information of an

graphics, or	Page 506 lines 13-21.	announcer's voice saying "low-salt Vindaloo" from among the information of its D:DATA_OF.ITS file and to place said selected information at said audio RAM. At the station of Fig. 7 and 7F, receiving said 5th commence- outputting message (#10) causes decoder, 203, to execute "GRAPHICS ON" at the PC-MicroKey system of microcomputer, 205. Automatically, microcomputer, 205, combines its specific video RAM binary image information of "456-1414" with its received conventional video information. And automatically 456-1414 is displayed in the lower middle portion of the picture screen of monitor, 202M.
text; and	Page 365 line 34. *See also* page 496.	"Nabisco Zwieback Teething Toast."
placing said selected video, audio, graphics, or text in said data module.	Page 366 lines 11-18.	Automatically, computer, 73, places said selected information (and any other information so selected) in a particular file called DATA_OF.ITS until the information of said file constitutes a complete instance of a particular data module set of Q. (Hereinafter, the data module set generated in example #9, under control of said intermediate generation set of Q, is called the "data module set of Q".)

7. Claim 9

Claim Language	Spec. Reference	Specification Language
The method of claim 3, wherein said generated instruction module enables said remote station to receive	Page 501 lines 16-25.	Automatically, under control of said instructions, microcomputer, 205, clears video RAM; sets the background color of video RAM to a transparent overlay black; determines that the aforementioned 1st working memory of said microcomputer, 205, holds southwest-quadrant information; selects from said D:DATA_OF.ITS file

		information of the aforementioned southwest delivery route telephone number, "456-1414", and causes binary image information of said number to be placed at bit locations that produce video image information in the lower middle portion of a video screen.
or present to a subscriber at least a portion of mass medium programming.	Page 506 lines 17-21.	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "456-1414" with its received conventional video information. And automatically 456-1414 is displayed in the lower middle portion of the picture screen of monitor, 202M.

8. Claim 10

Claim Language	Spec. Reference	Specification Language
The method of claim 3, wherein said control signal designates		
video,	Page 501 lines 16-25.	Automatically, under control of said instructions, microcomputer, 205, clears video RAM; sets the background color of video RAM to a transparent overlay black; determines that the aforementioned 1st working memory of said microcomputer, 205, holds southwest-quadrant information; selects from said D:DATA_OF.ITS file information of the aforementioned southwest delivery route telephone number, "456-1414", and causes binary image information of said number to be placed at bit locations that produce video image information in the lower middle portion of a video screen.
audio,	Page 489 lines 30-32.	selects the audio information of an announcer's voice saying "forty-three" from its file, D:DATA_OF.ITS; and places said information at said audio RAM.)
graphics, or	Page 506 lines 13-21.	At the station of Fig. 7 and 7F, receiving said 5th commence- outputting message (#10) causes decoder, 203, to execute "GRAPHICS ON" at the PC-MicroKey system of microcomputer, 205. Automatically,

		microcomputer, 205, combines its specific video RAM binary image information of "456-1414" with its received conventional video information. And automatically 456-1414 is displayed in the lower middle portion of the picture screen of monitor, 202M.
text,	Page 495 line 34 to page 496 line 3.	Automatically, microcomputer, 205, transmits additional print information of said program instruction set of Q.1 to printer, 221, causing printer, 221, to print: "in exchange for this coupon and the sum of" and "$".
said method further comprising the step of transmitting said designated video, audio, graphics or text.	Page 386 lines 12-14, and	to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
	page 384 line 35 to page 385 line 2.	to the field distribution system, 93, of said station, thereby transmitting the particular data-module-set message (#10) of said station to said system, 93.

9. Claim 11

The claim is directed to the apparatus that perform the receiving, computing, passing, embedding, and transmitting functions of claim 3. As with claim 3, regarding the functioning of the transmitter station, support is found at pages 374-390 of the specification. The corresponding functionality of the receiver station is supported at pages 468-516. Claim 11 is also supported independently at pages 354-374 of the specification, although not shown in the table below.

Claim Language	Spec. Reference	Specification Language
A remote station, comprising:	Page 375 lines 3-4.	The station of Fig. 6 is one intermediate transmission station controlled by said studio.
(a) receiving means	Page 375 line 5.	The station of Fig. 6 receives said network transmission at receiver, 53,....
for receiving a control signal	Page 377 line 4-35.	Then the program originating studio at said network originating and control station, embeds in said normal transmission location

		and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter- monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set-information message (#10)".)
	Page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
from a first remote station;	Page 377 lines 26-27.	Then the program originating studio at said network originating and control station,...
(b) computation means	Page 378 line 8.	Receiving said message at said computers, 73, causes each of said computers, 73, to load information....
coupled to said receiving means;	Page 375 line 5.	The station of Fig. 6 receives said network transmission at receiver, 53,....
(c) transmission means for passing said control signal to said computation means,	Page 378 lines 5-6.	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations.
wherein said computation means computes a variable value in response to said control signal	Page 379 line 5-10,	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117;....
and generates, based on said computed variable value, at least a portion of an instruction module comprising executable code,	and, lines 11-31.	...and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: Y = 1000.00 + 62.21875 + (2.117 * X) to select, compute; and replace other variable information until complete program instruction set information exists in higher language code at particular memory; to compile said higher language information; to

		link the information so complied with other compiled information; and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q.
said generated at least a portion of said instruction module to be transferred to a memory at a second remote station and executed upon command;	Page 484 lines 12-18. cf. page 364 line 25 to page 365 line 21, and page 16 lines 20-23.	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
(d) embedding means for embedding said generated at least a portion of said instruction module into an information transmission	Page 386 lines 9-12.	Receiving the information of the particular program- instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
to be broadcast or cablecast; and	Page 324 line 11-19.	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.
(e) broadcast transmission means for transmitting said	Page 375 line 6.	and retransmits said transmission immediately via modulator, 83.

information transmission		
to said second remote station	Page 484 lines 12-14.	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203,
in a broadcast or cablecast transmission.	Page 324 lines 11-19.	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.

10. Claim 12

In example #11, a satellite receives signals from a European Economic Community master transmitter station and retransmits the signals to a national transmitter station of an EEC member nation. The signals include a first computer program and a control signal. The first computer program and control signal cause the national transmitter station to generate a second computer program and transmit the second computer program to a local transmitter station. The second computer program causes the local transmitter station to generate a third computer program. The second computer program causes the local transmitter to generate a third computer program which is transmitted to and controls a subscriber station.

Claim 12 finds support at pages 533-556 of the specification.

Claim Language	Spec. Reference	Specification Language
A method of controlling	Page 541 lines 29-34,	Next said European master network station transmits in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national

		level intermediate generation set.
	and page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
a remote station based on a broadcast or cablecast transmission, comprising the steps of:	Page 534 lines 28-33.	Each nation has a national intermediate transmission station that is identical to the intermediate station of Fig. 6 except that it transmits output information of several individual television channels to receiver stations via a satellite in geosynchronous orbit over Europe rather than via a cable field distribution system.
receiving at least one instruct signal	Page 536 lines 4-6.	...programming transmitted via satellite by a particular European master network origination and control station....
	Page 541 lines 29-34.	Next said European master network station transmits in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.
which is effective to cause a first remote station	Page 534 lines 28-33.	See above.
to generate at least a portion of a control signal	Page 543 lines 20-25+.	In the mean time, executing their inputted information of said national level intermediate generation set causes the computers, 73, of said national intermediate stations each to generate information of a specific local level intermediate generation set ....
which is effective to cause a second remote station	Page 535 lines 18-22.	Each local government has a local intermediate transmission station that is identical to the intermediate station of Fig. 6 and that transmits multiplexed output information of several separate television channels via a cable field distribution system.
to compute a variable value in response to said control signal and	Page 545 lines 11-23.	Executing the information of its local level set causes the computer, 73, of each local intermediate station to access its specific LOCAL.TAX and LOCAL.EMP files and to compute formula-and-item

		-of-this-transmission information of specific local income and property tax formulas and local employment subsidy formulas....
generate, based on said computed variable value, at least a portion of an instruction module comprising executable code, said generated at least a portion of said instruction module to be transferred to a memory at a third remote station and executed upon command;	Page 545 lines 7-8. Page 24 lines 14-16.	...to generate information of a specific program instruction set in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2. (Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
receiving at least one transmitter control signal which operates at said second remote station to embed said generated at least a portion of said instruction module into	Page 536 lines 4-6. Page 544 lines 26-27.	preprogrammed to receive programming transmitted via satellite by a particular European master network origination and control station and the specific national intermediate transmission station ...said European master network station embeds and transmits a SPAM message that is addressed to ITS, computers, 73, of intermediate stations that are national stations and that instructs said stations to embed and transmit their specific local intermediate sets.
an information transmission to be broadcast or cablecast, and	Page 544 lines 32-34.	...the normal location of its particular second television channel transmission....
transmit said information transmission to said third remote station in a broadcast or cablecast transmission; and	Page 545 line 29 to page 546 line 5.	At 4:29:50 PM, GMT, after an interval of time that is long enough for each local intermediate generation station to generate its specific program instruction set, said European master network station transmits a particular SPAM first- master-cueing message (#11) that is addressed to ITS computers, 73, of intermediate stations that are national stations. Receiving said message causes each national intermediate station to generate and embed in the normal location of its particular second television channel transmission a particular SPAM first-national-cueing message (#11) that is addressed to ITS computers, 73, of intermediate stations that are local stations.

transmitting said at least one instruct signal and	Page 536 lines 4-6. Page 541 lines 29-34.	*See above.* Next said European master network station transmits in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.
said at least one transmitter control signal to said first remote station.	Page 545 line 29 to page 546 line 5.	At 4:29:50 PM, GMT, after an interval of time that is long enough for each local intermediate generation station to generate its specific program instruction set, said European master network station transmits a particular SPAM first- master-cueing message (#11) that is addressed to ITS computers, 73, of intermediate stations that are national stations. Receiving said message causes each national intermediate station to generate and embed in the normal location of its particular second television channel transmission a particular SPAM first-national-cueing message (#11) that is addressed to ITS computers, 73, of intermediate stations that are local stations.

11. Claim 13

The claim is directed to the method performed by the first remote (e.g., national transmitter) station of claim 12. The first remote station generates a computer program and transmits the computer program to a second (e.g., local) transmitter station in a signal that contains video. The computer program causes the second transmitter station to generate a second computer program. The computer program causes the second transmitter to generate a second computer program which is transmitted to and controls a subscriber station.

Claim 13 finds support at pages 533-556 of the specification.

Claim Language	Spec. Reference	Specification Language
A method of controlling a remote station,comprising the steps of:	Page 544 line 31 to page 545 line 5.	Receiving said message causes the computer, 73, of each national intermediate station to embed in the normal location of its particular second television channel transmission and to transmit a particular SPAM message that

		is addressed to ITS computers, 73, and that contains information segment information of its specific local level intermediate generation set. Receiving the specific SPAM message of its national intermediate station causes the computer, 73, of each local intermediate station...
	and page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
generating at least a control portion of at least one control signal,	Page 543 lines 20-25+.	In the mean time, executing their inputted information of said national level intermediate generation set causes the computers, 73, of said national intermediate stations each to generate information of a specific local level intermediate generation set ....
said at least one control signal effective to cause said remote station to (1) compute a variable value in response to said at least one control signal,	Page 545 lines 11-23.	Executing the information of its local level set causes the computer, 73, of each local intermediate station to access its specific LOCAL.TAX and LOCAL.EMP files and to compute formula-and-item -of-this-transmission information of specific local income and property tax formulas and local employment subsidy formulas....
(2) generate, based on said variable value, at least a control portion of an instruction module comprising executable code, said at least a control portion of said instruction module to be transferred to a memory at a subscriber station and executed upon command, and	Page 545 lines 7-8.	...to generate information of a specific program instruction set in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2.
	Page 547 lines 19-26.	In the fashion of example #9, each local intermediate station detects the particular SPAM message of its recorder, 76, at its decoder, 77, and receiving its particular message causes each station to embed and transmit end of file signal information then a particular first SPAM message that is addressed to URS microcomputers, 205, and that contains complete information of its particular program instruction set.
	Page 548 lines 1-6.	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205, of

		said station and to commence generating the specific combined medium output information of its subscriber station.
(3) transmit said at least said control portion of said generated instruction module in a broadcast or cablecast transmission; and	Page 547 lines 22-26.	...causes each station to embed and transmit end of file signal information then a particular first SPAM message that is addressed to URS microcomputers, 205, and that contains complete information of its particular program instruction set.
transmitting said at least one control signal to said remote station in an information transmission which contains video.	Page 544 lines 31-35.	Receiving said message causes the computer, 73, of each national intermediate station to embed in the normal location of its particular second television channel transmission and to transmit a particular SPAM message that is addressed to ITS computers, 73,....

12. Claim 14

The claim is directed to the method performed by an originating transmitter (e.g., satellite) of claim 12. The satellite receives an information transmission to be broadcast or cablecast, a first computer program and a control signal. The first computer program and control signal cause a transmitter station (e.g., national transmitter) to generate a second computer program and transmit the second computer program to a remote station (e.g., local cable system). The second computer program causes the local cable system to generate a third computer program, which causes a subscriber station at the local cable system to computer information, store the information in a file, and transmit the first (e.g., for billing or customer servicing) upon command. The satellite transmits the information transmission, the first computer program and the control signal.

Claim 14 finds support at pages 533-556 of the specification.

Claim Language	Spec. Reference	Specification Language
A method of controlling a remote station based on a broadcast or	Page 541 lines 29-34.	Next said European master network station transmits in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of

cablecast transmission, comprising the steps of:		intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.
	Page 59 lines 29-31.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Page 545 lines 23-28.	Automatically, each computer, 73, of a local intermediate station incorporates its computed information selectively into selected generally applicable information of said local level intermediate generation set, compiles information, and links information, thereby generating its specific program instruction set.
(1) receiving an information transmission to be broadcast or cablecast;	Page 536 lines 4-6.	... programming transmitted via satellite by a particular European master network origination and control station ....
(2) receiving at least one instruct signal which is effective to accomplish:	Page 541 lines 29-34.	Next said European master network station transmits in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.
	Page 42 lines 8-11.	(Hereinafter, instances of computer program information that cause intermediate transmission station apparatus to generate program instruction set information and/or command information are called "intermediate generation sets.")
(a) effecting a transmitter station	Page 536 lines 4-6.	...preprogrammed to receive programming transmitted via satellite by a particular European master network origination and control station....
to generate at least a portion of at least one first control signal,	Page 534 lines 28-33.	Each nation has a national intermediate transmission station that is identical to the intermediate station of Fig. 6 except that it transmits output information of several individual television channels to receiver stations via a satellite in geosynchronous orbit over Europe rather than via a cable field distribution system.
said at least one first control signal effective	Page 543 lines 20-25+.	In the mean time, executing their inputted information of said national level

to cause said remote station to compute a variable value in response to said at least one first control signal,		intermediate generation set causes the computers, 73, of said national intermediate stations each to generate information of a specific local level intermediate generation set ....
generate, based on said variable value, at least a portion of an instruction module comprising executable code, said at least a portion of said instruction module to be transferred to a memory at said remote station and executed upon command, and	Page 545 lines 11-23.	Executing the information of its local level set causes the computer, 73, of each local intermediate station to access its specific LOCAL.TAX and LOCAL.EMP files and to compute formula-and-item -of-this-transmission information of specific local income and property tax formulas and local employment subsidy formulas....
	Page 545 lines 7-8.	...to generate information of a specific program instruction set in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2.
	Page 544 line 31 to page 545 line 11.	Receiving said message causes the computer, 73, of each national intermediate station to embed in the normal location of its particular second television channel transmission and to transmit a particular SPAM message that is addressed to ITS computers, 73, and that contains information segment information of its specific local level intermediate generation set. Receiving the specific SPAM message of its national intermediate station causes the computer, 73, of each local intermediate station to execute the contained local level intermediate generation set of said message and to generate information of a specific program instruction set in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2.
transmit said generated at least a portion of said instruction module in said broadcast or cablecast transmission; and	Page 547 lines 22-26.	...causes each station to embed and transmit end of file signal information then a particular first SPAM message that is addressed to URS microcomputers, 205, and that contains complete information of its particular program instruction set.
(b) effecting said remote station	Page 535 lines 18-22.	Each local government has a local intermediate transmission station that is identical to the intermediate station of Fig. 6

		and that transmits multiplexed output information of several separate television channels via a cable field distribution system.
to generate at least a portion of at least one second control signal,	Page 545 line 23-28.	Automatically, each computer, 73, of a local intermediate station incorporates its computed information selectively into selected generally applicable information of said local level intermediate generation set, compiles information, and links information, thereby generating its specific program instruction set.
said at least one second control signal effective to cause	Page 548 lines 1-6.	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205, of said station and to commence generating the specific combined medium output information of its subscriber station.
a subscriber station at said remote station	Page 536 lines 3-10.	Each farmer's station ... is a subscriber station in the field distribution system of the local intermediate transmission station of the farmer's local government.
to compute a variable value in response to said at least one second control signal,	Page 549 line 33 to page 550 line 2.	... each farmer's microcomputer, 205, under control of the particular program instruction set generated and transmitted by its local intermediate station, computes its particular farmer's "optimal" crop planting plan by making reference to said farmer's specific data ...
	Page 555 lines 30-35.	Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated
generate at least a portion of a module based on said variable value,	Page 551 lines 11-14.	Automatically, under control of its received program instruction set, the microcomputer, 205, of its farmer's station records complete information of said farmer's crop planting plan at its A: disk in a file named PLANTING.DAT.
and transmit said module upon	Page 555 lines 21-29.	each farmer enters information at his local input, 225, that modifies the information of his

command;		file, "PLANTING.DAT," to suit his own wishes and inclinations then executes particular information of said TELEPHON.EXE module that causes the instructions of said module to cause his signal processor, 200, to transmit the information of his "PLANTING.DAT" file, via telephone network in the fashion of example #10, to a computer at a particular remote data collection station.
(3) receiving at least one transmitter control signal which operates at said transmitter station to communicate at least one of	Page 536 lines 4-6.	...preprogrammed to receive programming transmitted via satellite by a particular European master network origination and control station....
	Page 59 lines 29-33.	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Page 539 line 34 to page 540 line 13.	At 3:59:55 PM, GMT, said European master network station transmits end of file signal information then invokes broadcast control of each national intermediate transmission station computer, 73, and each ultimate receiver station microcomputer, 205, that receives SPAM information of said master transmission. Automatically said European master network station commences controlling directly the computers, 73, of said national intermediate stations and the microcomputers, 205, of said ultimate receiver stations. And said master station causes each national intermediate station computer, 73, to embed in its particular second television channel transmission and to transmit end of file signal information then to invoke broadcast control of the computers, 73, of its specific local intermediate transmission stations.
(i) said at least one instruct signal and	Page 541 lines 29-34.	Next said European master network station transmits in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.
(ii) said at least one	Page 544 lines 25-30.	...said European master network station

first control signal to a transmitter; and		embeds and transmits a SPAM message that is addressed to ITS, computers, 73, of intermediate stations that are national stations and that instructs said stations to embed and transmit their specific local intermediate sets.
(4) transmitting said information transmission, said at least one instruct signal, and said at least one transmitter control signal to at least one of said transmitter station and said remote station.	Page 536 lines 4-6. Page 541 lines 29-34. Page 539 line 34 to page 540 line 13.	*See above.* Next said European master network station transmits in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set. *See above.*

13. Conclusion

Applicants respectfully submit that the pending claims of the subject application particularly point out and claim the subject matter sufficiently for one of ordinary skill in the art to comprehend the bounds of the claimed invention. The test for definiteness of a claim is whether one skilled in the art would understand the bounds of the patent claim when read in light of the specification, and if the claims so read reasonably apprise those skilled in the art of the scope of the invention, no more is required. *Credle v. Bond*, 25 F.3d 1556, 30 USPQ2d 1911 (Fed. Cir. 1994). The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994). Applicants have amended the claims to enhance clarity and respectfully submit that all pending claims are fully enabled by the specification and distinctly indicate the metes and bounds of the claimed subject matter.

E. Support for Previous Amendment of "signal words" to "signal units"

During the interview of July 15th, 1999, the Examiners requested Applicants to demonstrate that no new matter was introduced into the specification in the amendment entered on October 21, 1998 which changed the following language in the specification on page 37 lines 22-25:

> "Controller, 39, 44, or 47, is preprogrammed to receive [units] words of signal information, to assemble said [units] words into signal [words] units that subscriber station apparatus can receive and process, and to transfer said [words] units to said apparatus."

Applicants submit that this amendment was merely made to correct a typographical mistake on their part. Additionally, specification support to verify the necessity of the amendment is found in the following language from page 14 lines 22-35.

> In all cases, signals may convey information in discrete words, transmitted at separate times or in separate locations, that receiver apparatus must assemble in order to receive one complete instruction.
>
> (The term "signal unit " hereinafter means one complete signal instruction or information message unit.... The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission....)
> *Emphasis added.*

From the above language, a "signal unit" is "one complete signal instruction or information message unit." *Words* of signal information are received and assembled into *signal units*, or completed instructions, for the subscriber station apparatus to receive, process and transfer. Thus, it should be clear from this passage that no new matter was introduced with the amendment and Applicants urge the PTO to maintain and/or enter the previous amendment as appropriate under 37 C.F.R. § 1.118 (a).

F. Prior art anticipation by Campbell et al., U.S. Pat. No. 4,536,791

The examiner of record indicates that all of Applicants claims are anticipated by Campbell et al. The following sections, categorized by each independent claim, will demonstrate how Campbell et al. fails to anticipate Applicants' claim language.

U.S. Patent No. 4,536,791 to Campbell et al. relates to addressable cable television control systems with a video formatted data transmission. Campbell et al. discloses an addressable cable television control system that transmits a television program and data signal transmission from a central station to a plurality of remote user stations. Campbell et al.'s data signals include both control and text signals in video line format that are inserted on the vertical interval of the television signals. An intelligent converter at each remote user location processes the data signals to enable controlled descrambling of the television transmission to the system on the basis of channel, tier of service, special event and program subject matter. The converter includes apparatus for interfacing with a two-way interactive data acquisition and control system.

Campbell et al. teaches a head end station that includes a central data system utilizing a control computer that gathers data from a wide variety of sources and formats the data for transmission on video frequency channels. The formatted data is then transmitted by communication link to a television program processor where it is incorporated into the vertical blanking intervals of video signals by a variety of television program sources. The head end unit then transmits the combined cable television and data signal to remote subscribers. Normally, the signals are then transmitted through a cable network to a plurality of subscribers. The signals are received by an addressable converter that determines whether to descramble the received television signal based on proper

subscriber, event and eligibility data stored at the receiver station, or to leave the signal in its scrambled format.

1. Applicants' claim 3

With respect to Applicants' claim 3, Campbell et al. fails to teach, *inter alia,*

passing said control signal to a computer and *causing said computer to compute a variable value in response to said control signal;*

generating, based on said computed variable value, *an instruction module* comprising *executable code,* said generated instruction module to be *transferred to a memory* at a second remote station and *executed upon command;* and

embedding said generated instruction module into an information transmission to be broadcast or cablecast.

As best Applicants understand, the Examiner of record interprets Campbell et al. to suggest that Applicants' control signal is the request signal the converter 40 sends to the head end 11 to authorize reception of the channel in the pay-per-view example at column 17 lines 50-64. However, Campbell et al.'s request fails to cause a computer to compute a variable value in response to the control signal. Campbell et al. merely causes the head end 11 to insert control codes in the vertical blanking interval to allow the descrambler 116 to descramble the received signal. There is no teaching of the generation of an instruction module based on the computed variable value. Furthermore, there is no teaching as to the control codes of Campbell et al. comprising executable code able to be transferred to a memory device at a remote station and to be executed upon command. The control codes of Campbell et al. merely cause the descrambler 116 to be enabled. Thus, *ipso facto,* Campbell et al. cannot teach the embedding of a generated instruction module as claimed by Applicants into an information transmission.

Applicants respectfully submit that Campbell et al. does not anticipate claim 3 since the reference fails to disclose every element of the claimed invention. Therefore, Applicants request the claims be permitted to issue.

Claims 4-10 depend upon independent claim 3. As discussed *supra*, Campbell et al. fails to disclose every element of claim 3 and thus, *ipso facto*, Campbell et al. fails to anticipate dependent claims 4-10. Therefore, Applicants request that claims 4-10 be permitted to issue.

2. Applicants' claim 11

With respect to Applicants' claim 11, Campbell et al. fails to teach, *inter alia*,

transmission means for passing said control signal to said computation means, wherein said *computation means computes a variable value in response to said control signal* and *generates*, based on said computed variable value, ***at least a portion of an instruction module*** comprising *executable code*, said generated at least a portion of said instruction module to be *transferred to a memory* at a second remote station and *executed upon command*;

embedding means *for embedding said generated at least a portion of said instruction module* into an information transmission to be broadcast or cablecast; and

broadcast transmission means for transmitting said *information transmission to said second remote station* in a broadcast or cablecast transmission.

As best Applicants understand, the Examiner of record interprets Campbell et al.'s to suggest that Applicants' control signal is the request signal the converter 40 sends to the head end 11 to authorize reception of the channel in the pay-per-view example at column 17 lines 50-64, as mentioned above. However, Campbell et al.'s request fails teach computation means that computes

a variable value in response to said control signal and that generates, based on said computed variable value, at least a portion of **an instruction module** *comprising* executable code, said generated at least a portion of said instruction module to be transferred to a memory at a second remote station and executed upon command. Campbell et al. merely causes the head end 11 to insert control codes in the vertical blanking interval to allow the descrambler 116 to descramble the received signal. There is no teaching of the generation of an instruction module based on the computed variable value. Furthermore, there is no teaching as to the control codes of Campbell et al. comprising executable code able to be transferred to a memory device at a remote station and to be executed upon command. The control codes of Campbell et al. merely cause the descrambler 116 to be enabled. Thus, *ipso facto*, Campbell et al. cannot teach the embedding of a generated instruction module as claimed by Applicants into an information transmission.

Applicants respectfully submit that Campbell et al. does not anticipate claim 11 since the reference fails to disclose every element of the claimed invention. Therefore, Applicants request the claim be permitted to issue.

3. Applicants' claim 12

With respect to Applicants' claim 12, Campbell et al. fails to teach, *inter alia*,

receiving *at least one instruct signal* which is effective to cause a first remote station to *generate* at least *a portion of a control signal* which is *effective to cause a second remote station* to *compute a variable value* in response to said control signal and *generate*, based on said computed variable value, ***at least a portion of an instruction module*** comprising *executable code*, said generated at least a portion of

said instruction module *to be transferred to a memory* at a third remote station and *executed upon command;*

receiving at least one transmitter control signal which operates at said second remote station to *embed said generated at least a portion of said instruction module* into an information transmission to be broadcast or cablecast, *and transmit said information transmission to said third remote station* in a broadcast or cablecast transmission; and

transmitting said at least one instruct signal and said at least one transmitter control signal *to said first remote station.*

As best Applicants understand, the Examiner of record interprets Campbell et al. to suggest that Applicants' control signal is the request signal the converter 40 sends to the head end 11 to authorize reception of the channel in the pay-per-view example at column 17 lines 50-64. However, Campbell et al.'s request fails to cause a computer to compute a variable value in response to the control signal. Campbell et al. merely causes the head end 11 to insert control codes in the vertical blanking interval to allow the descrambler 116 to descramble the received signal. There is no teaching of the generation of an instruction module based on the computed variable value. Furthermore, there is no teaching as to the control codes of Campbell et al. comprising executable code able to be transferred to a memory device at a remote station and to be executed upon command. The control codes of Campbell et al. merely cause the descrambler 116 to be enabled. Thus, *ipso facto,* Campbell et al. cannot teach the embedding of a generated instruction module as claimed by Applicants into an information transmission.

Likewise, Campbell et al. fails to teach a transmitter control signal that operates a remote station to embed and subsequently transmit the instruction module as defined by Applicants' claim language.

Applicants respectfully submit that Campbell et al. does not anticipate claim 12 since the reference fails to disclose every element of the claimed invention. Therefore, Applicants request the claim be permitted to issue.

4. Applicants' claim 13

With respect to Applicants' claim 13, Campbell et al. fails to teach, *inter alia,*

generating at least a control portion of *at least one control signal,* said at least one control signal effective *to cause said remote station* to (1) *compute a variable value in response to said at least one control signal,* (2) *generate,* based on said variable value, at least ***a control portion of an instruction module*** comprising *executable code,* said at least a control portion of said instruction module to be *transferred to a memory* at a subscriber station and *executed upon command,* and (3) transmit said at least said control portion of said generated instruction module in a broadcast or cablecast transmission; and

transmitting said at least one control signal *to said remote station in an information transmission which contains video.*

As best Applicants understand, the Examiner of record interprets Campbell et al. to suggest that Applicants' control signal is the request signal the converter 40 sends to the head end 11 to authorize reception of the channel in the pay-per-view example at column 17 lines 50-64. However, Campbell et al.'s request fails to cause a computer to compute a variable value in response to the control signal. Campbell et al. merely causes the head end 11 to insert control codes in the vertical blanking interval to allow the descrambler 116 to descramble the received signal. There is no teaching of the generation of an instruction module based on the computed variable value. Furthermore, there is no teaching as to the control codes of Campbell et al. comprising executable code

able to be transferred to a memory device at a remote station and to be executed upon command. The control codes of Campbell et al. merely cause the descrambler 116 to be enabled. Thus, *ipso facto*, Campbell et al. cannot teach the embedding of a generated instruction module as claimed by Applicants into an information transmission.

Additionally, Applicants claim transmitting said at least one control signal to said remote station in an information transmission which contains video. Based on the Examiner's reasoning, the converter 40 request to the data control system at the head end 11 must be transmitted to the head end in an information transmission which contains video. There is no teaching or suggestion in Campbell et al. that the request to the head end from the addressable converter 40 contains video.

Applicants respectfully submit that Campbell et al. does not anticipate claim 13 since the reference fails to disclose every element of the claimed invention. Therefore, Applicants request the claim be permitted to issue.

5. Applicants' claim 14

With respect to Applicants' claim 14, Campbell et al. fails to teach, *inter alia*,

receiving at least one instruct signal which is effective to accomplish:

(a) *effecting a transmitter station to generate* at least a portion of at least one *first control signal*, said at least one first control signal *effective to cause said remote station to compute a variable value* in response to said at least one first control signal, *generate*, based on said variable value, ***at least a portion of an instruction module*** comprising *executable code*, said at least a portion of said instruction module *to be transferred to a memory* at said remote station and *executed upon command*, and transmit said generated at

least a portion of said instruction module in said broadcast or cablecast transmission; and

(b) effecting said remote station *to generate at least a portion of at least one second control signal*, said at least one second control signal effective *to cause a subscriber station* at said remote station *to compute a variable value in response to said at least one second control signal, generate* at *least a portion of a module based on said variable value*, and transmit said module upon command;

receiving *at least one transmitter control signal* which operates at said transmitter station *to communicate* at least one of (i) *said at least one instruct signal* and (ii) said *at least one first control signal* to *a transmitter*; and

transmitting said information transmission, said at least one instruct signal, and said at least one transmitter control signal to at least one of said transmitter station and said remote station.

As best Applicants understand, the Examiner of record interprets Campbell et al. to suggest that Applicants' control signal is the request signal the converter 40 sends to the head end 11 to authorize reception of the channel in the pay-per-view example at column 17 lines 50-64. However, Campbell et al.'s request fails to cause a computer to compute a variable value in response to the control signal. Campbell et al. merely causes the head end 11 to insert control codes in the vertical blanking interval to allow the descrambler 116 to descramble the received signal. There is no teaching of the generation of an instruction module based on the computed variable value. Furthermore, there is no teaching as to the control codes of Campbell et al. comprising executable code able to be transferred to a memory device at a remote station and to be executed upon command. The control codes of Campbell et al. merely cause the descrambler 116 to be enabled. Thus, *ipso facto*, Campbell et al. cannot teach the

embedding of a generated instruction module as claimed by Applicants into an information transmission.

Additionally, Campbell et al. fails to teach or suggest the (b) limitation in claim 14 of effecting a remote station to generate...a second control signal...effective to cause a subscriber station to compute a variable value from which a module is generated on its basis.

Applicants respectfully submit that Campbell et al. does not anticipate claim 14 since the reference fails to disclose every element of the claimed invention. Therefore, Applicants request the claim be permitted to issue.

Applicants further respectfully submit that claims 3-14 in the present application should be permitted to issue because these methods are not disclosed, taught, suggested, or implied by the applied prior art. For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Foundation v. Genetech, Inc.*, 927 F.2d 1565, 18 USPQ2d 1001, 18 USPQ2d 1896 (Fed. Cir. 1991). Absence from a cited reference of any element of a claim negates anticipation of that claim by the reference. *Kloster Speedsteel AB v Crucible, Inc.*, 230 USPQ 81 (Fed. Cir. 1986), *on rehearing*, 231 USPQ 160 (Fed. Cir. 1986).

III. CONCLUSION

In accordance with the foregoing it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. Further, all pending claims are patentably distinguishable over the prior art of record, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the application is submitted as being in a condition for issuance, which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such informalities.

Respectfully submitted,

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